

## THE GENUS *MICROPHADNUS* CAMERON IN AUSTRALIA (HYMENOPTERA: POMPILIDAE)<sup>1</sup>

Howard E. Evans<sup>2</sup>

ABSTRACT: *Microphadnus* Cameron is recorded for the first time from Australia, where it is represented by a single known species, *antipodes* n. sp. (Queensland and New South Wales).

*Microphadnus* Cameron (1905) is a poorly known genus containing several species of very small wasps having narrow wings with slightly reduced venation as well as fine striae on the posterior part of the propodeum. *M. pumilus* Costa is widely distributed in southern parts of the Palearctic region, while *M. bicolor* Cameron occurs in South Africa. For several years I have been aware that the genus is represented in Australia, and it is the purpose of this paper to record its occurrence on that continent and to describe the single known species. *Microphadnus* belongs in the tribe Pompilini, not far, I believe, from *Pompilus*. *Plagioceps* Haupt (1930) is a synonym.

*M. antipodes* n. sp. is very similar to both *pumilus* and *bicolor*, differing from the former in having the sides of the propodeal slope much more prominent and ridge-like and the third discoidal cell of the fore wing somewhat wider. In these respects it is more like *bicolor*, but that species has the legs partly rufous and the distance between the eyes considerably greater than in *antipodes*. I am not aware that the male terminalia of any species of *Microphadnus* have previously been described, so those of *antipodes* are described and figured here.

### *Microphadnus antipodes* n.sp. (Figs. 1-3)

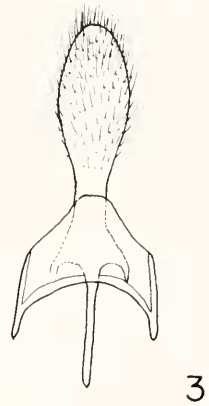
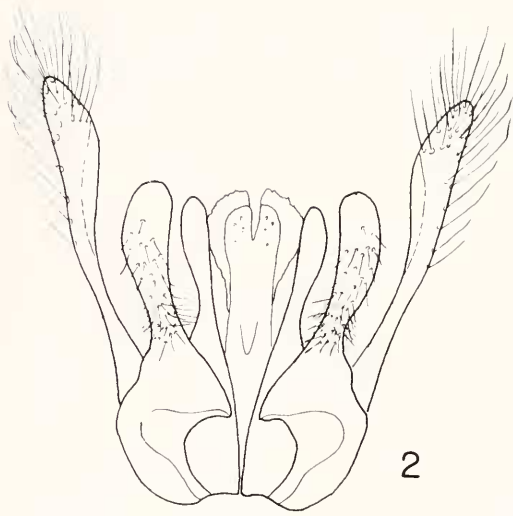
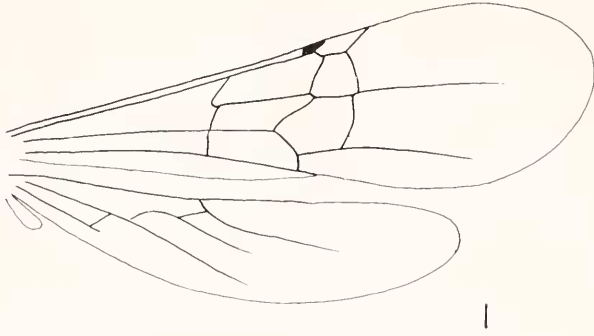
Female. Length 5 mm; fore wing 4.5 mm. Black, body covered in considerable part with silvery pubescence; head and thorax silvery except pubescence brownish on upper front, vertex, and much of dorsum of thorax and propodeum; legs silvery basally; gaster with prominent silvery bands at apices of tergites 1-3, sternites 1 and 2 mostly silvery. Body devoid of erect setae except for a few bristles on clypeus and mandibles as well as several strong setae on apical segments of gaster. Wings subhyaline, fore wing with a broad dark band over apical third, extending as far as tip of marginal cell.

Head 1.25 X as wide as high; front narrow, its greatest width 0.51 X that of head; clypeus 2.2 X as wide as high, truncate apically; postocellar line 1.3 X ocello-ocular line; vertex passing straight across between tops of eyes. First four antennal segments in a ratio of 4:2:5:5.

---

<sup>1</sup>Received November 4, 1980.

<sup>2</sup>Department of Zoology and Entomology, Colorado State University, Fort Collins, Colorado 80523. This research was conducted while the author held a research fellowship at the University of Queensland, St. Lucia, Queensland, Australia.



Figs. 1-3. *Microphadnus antipodes* n.sp. 1, wings of ♀; 2, ♂ genitalia, ventral aspect; 3, ♂ subgenital plate, ventral aspect.

segment 3 equal to 0.8 X distance between eyes at top. Pronotum elongate, its slope low and even, posterior margin broadly arcuate, weakly angulate at midline; postnotum narrowly exposed medially, otherwise essentially absent; propodeum elongate, with a shallow median sulcus on basal two-thirds, its posterior angles prominent, ridge-like; posterior slope of propodeum with delicate, rather widely spaced striae. Tibiae and tarsi spinose, but fore tarsus without a pecten; ultimate tarsal segments each with some weak spines latero-ventrally. Wing venation as figured.

**Male.** Length 4.8 mm; fore wing 3.4 mm. Coloration as well as distribution of silvery pubescence much as in female: as in that sex, tergites 1-3 have apical silvery bands, but tergites 5 and 6 also have weaker bands, and ventrally sternite 1 is mostly silvery, sternite 2 has an apical silvery band, and sternite 3 has an incomplete band. Aside from a few bristles on the mandibles, the body has no erect setae whatever. Wing color and venation as in female. Head 1.12 X as wide as high; greatest width of front 0.59 X head width; clypeus 2.2 X as wide as high, not quite as wide as closest approximation of eyes near bottom, apical clypeal margin truncate; postocellar line slightly exceeding ocello-ocular line. Features of thorax and propodeum essentially as in female. Gaster very slender; subgenital plate slender, especially basally; genitalia without basal hooklets, parameres much exceeding volsellae and aedeagus, as figured.

Holotype ♀, allotype ♂, 3 paratype ♀♀ and 2 paratype ♂♂: Eungella National Park, 80 km NW Mackay, Queensland, 16-19 October 1979 (H.E. and M.A. Evans and A. Hook). Paratype ♂: Isaacs River, 100 km NE Clermont, Queensland, 20 October 1979 (H.E. and M.A. Evans and A. Hook). Paratype ♀: 17 km SW Bourke, New South Wales, 14 December 1976 (E.M. Exley and T. Low, on weeds). Holotype and allotype in Queensland Museum, Brisbane; paratypes at University of Queensland, St. Lucia; Australian National Insect Collections, Canberra; and British Museum (Natural History), London.

#### Remarks

The type, allotype, and five paratypes were taken in a field adjacent to montane rain forest. The remaining two specimens were taken at lower elevations and in areas of much lower rainfall. In spite of this, little variation is evident, although the male from Isaacs River is quite small (fore wing 2.8 mm). The occurrence of the species in semidesert areas of New South Wales suggests that it is widely distributed and broadly adapted ecologically. That this is not a ground-nester is suggested by the absence of a pecten on the fore tarsi of the female. Ferton (1897) found that the Palaearctic species *pumilus* (= *Evagetes laboriosus* Ferton, according to Haupt, 1930) nests in hollow twigs lying on the ground or in empty snail shells, closing off its cells with small stones and bits of debris. The prey of *pumilus* consists of immature Lycosidae and Salticidae.

#### LITERATURE CITED

- Cameron, P. 1904. On the Hymenoptera of the Albany Museum, Grahamstown (Second paper). *Rec. Albany Mus.* 1:212.  
Ferton, C. 1897. Nouvelles observations sur l'instinct des Pompilides (Hyménoptères). *Act. Soc. Linn. Bordeaux* 52: 20.  
Haupt, H. 1930. Die Einordnung der mit bekannten Psammocharidae mit 2 Cubitalzellen in mein System. *Mitt. Zool. Mus. Berlin* 16: 777-780.